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In the Claims

Claims 31, 32, 34-50, 54-81, and 85-96 are pending in the application with claims 54, 59, 63, and 73-81 amended herein and claims 82-84 cancelled herein.

Claims 1-30 (canceled).

31. (previously presented) A layer comprising high purity tantalum, less than about 500 ppm, by weight, total metallic impurities, less than 20 ppm, by weight, total of tungsten and molybdenum, and less than 50 ppm, by weight, niobium.

32. (previously presented) The layer of claim 31 wherein the layer is formed by sputter deposition.

Claim 33 (canceled).

34. (previously presented) The layer of claim 31 comprising less than about 10 ppmw niobium.

35. (previously presented) A sputtering target blank comprising tantalum, less than 500 ppm by weight (ppmw) total metallic impurities, less than 5 ppmw total of molybdenum and tungsten, less than about 100 ppmw oxygen, and less than 50 ppmw niobium.

36. (original) The blank of claim 35 comprising less than 10 ppmw niobium.

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37. (original) The blank of claim 35 comprising less than 2 ppmw total of molybdenum and tungsten.

38. (original) The blank of claim 35 comprising less than 25 ppmw of oxygen.

39. (original) The blank of claim 35 comprising less than 10 ppb by weight (ppbw) each of uranium and thorium.

40. (original) A sputtering target blank comprising tantalum, less than 500 ppmw total metallic impurities, less than 5 ppmw total of molybdenum and tungsten, less than about 100 ppmw oxygen, and less than or equal to 10 ppbw each of uranium and thorium.

41. (original) A sputtering target blank comprising tantalum, less than 500 ppm by weight (ppmw) total metallic impurities, less than 2 ppmw total of molybdenum and tungsten, and less than 25 ppmw oxygen.

42. (original) A sputtering target comprising the blank of claim 35.

43. (original) A sputtering target comprising the blank of claim 40.

44. (original) A sputtering target comprising the blank of claim 41.

45. (original) A material comprising tantalum, at least the tantalum being sputter deposited from the blank of claim 35.

46. (original) The material of claim 45 consisting essentially of Ta metal, Ta₂O₅, or TaN.

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47. (original) A material comprising tantalum, at least the tantalum being sputter deposited from the blank of claim 40.

48. (original) The material of claim 47 consisting essentially of Ta metal, Ta₂O₅, or TaN.

49. (original) A material comprising tantalum, at least the tantalum being sputter deposited from the blank of claim 41.

50. (original) The material of claim 49 consisting essentially of Ta metal, Ta₂O₅, or TaN.

Claims 51-53 (canceled).

54. (currently amended) A tantalum sputtering target blank comprising tantalum, less than 500 ppmw total metallic impurities, ~~[[and]]~~ less than 5 ppm by weight (ppmw) molybdenum or tungsten and less than 3 ppmw niobium.

55. (previously presented) The blank of claim 54 comprising less than 5 ppmw molybdenum.

56. (previously presented) The blank of claim 54 comprising less than 5 ppmw tungsten.

57. (previously presented) The blank of claim 54 comprising less than 3 ppmw molybdenum or tungsten.

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58. (previously presented) The blank of claim 54 comprising at least 99.99 weight percent tantalum.

59. (currently amended) A tantalum sputtering target blank comprising tantalum, less than 500 ppmw total metallic impurities, less than 5 ppmw each of molybdenum and tungsten, and less than 50 ppmw niobium.

60. (previously presented) The blank of claim 59 comprising less than 3 ppmw each of molybdenum and tungsten.

61. (previously presented) The blank of claim 59 further comprising less than 3 ppmw niobium.

62. (previously presented) The blank of claim 59 comprising at least 99.99 weight percent tantalum.

63. (currently amended) A tantalum sputtering target blank comprising tantalum, less than 500 ppmw total metallic impurities, and less than 50 ppmw total of molybdenum, tungsten, and niobium.

64. (previously presented) The blank of claim 63 comprising less than 20 ppmw total of molybdenum, tungsten, and niobium.

65. (previously presented) The blank of claim 63 comprising less than 10 ppmw total of molybdenum, tungsten, and niobium.

66. (previously presented) The blank of claim 63 comprising less than 5 ppmw total of molybdenum, tungsten, and niobium.

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67. (previously presented) A sputtering target comprising the blank of claim 54.

68. (previously presented) A sputtering target comprising the blank of claim 59.

69. (previously presented) A sputtering target comprising the blank of claim 63.

70. (previously presented) A material comprising tantalum, at least the tantalum being sputter deposited from the blank of claim 67.

71. (previously presented) A material comprising tantalum, at least the tantalum being sputter deposited from the blank of claim 68.

72. (previously presented) A material comprising tantalum, at least the tantalum being sputter deposited from the blank of claim 69.

73. (currently amended) A tantalum material comprising tantalum, less than 500 ppmw total metallic impurities, ~~[[and]]~~ less than 5 ppmw molybdenum or tungsten and less than 3 ppmw niobium.

74. (currently amended) A tantalum material comprising tantalum, less than 500 ppmw total metallic impurities, less than 5 ppmw each of molybdenum and tungsten, and less than 50 ppmw niobium.

75. (currently amended) A tantalum material comprising tantalum, less than 500 ppmw total metallic impurities, and less than 50 ppmw total of molybdenum, tungsten, and niobium.

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76. (currently amended) A tantalum material sputtering precursor comprising tantalum, less than 500 ppmw total metallic impurities, ~~[[and]]~~ less than 5 ppmw molybdenum or tungsten and less than 3 ppmw niobium.

77. (currently amended) A tantalum material sputtering precursor comprising tantalum, less than 500 ppmw total metallic impurities, less than 5ppmw each of molybdenum and tungsten, and less than 50 ppmw niobium.

78. (currently amended) A tantalum material sputtering precursor comprising tantalum, less than 500 ppmw total metallic impurities, and less than 50 ppmw total of molybdenum, tungsten, and niobium.

79. (currently amended) Sputtered tantalum material comprising tantalum, less than 500 ppmw total metallic impurities, ~~[[and]]~~ less than 5 ppmw molybdenum or tungsten and less than 3 ppmw niobium.

80. (currently amended) Sputtered tantalum material comprising tantalum, less than 500 ppmw total metallic impurities, less than 5ppmw each of molybdenum and tungsten, and less than 50 ppmw niobium.

81. (currently amended) Sputtered tantalum material comprising tantalum, less than 500 ppmw total metallic impurities, and less than 50 ppmw total of molybdenum, tungsten, and niobium.

Claims 82-84 (cancelled).

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85. (previously presented) An ingot comprising high purity tantalum comprising tantalum, less than about 500 ppm, by weight, total metallic impurities, less than about 50 ppm, by weight, niobium, and less than about 50 ppm, by weight, tungsten or molybdenum.

86. (previously presented) The ingot of claim 85 wherein less than about 100 ppmw oxygen is present.

87. (previously presented) The ingot of claim 85 comprising tantalum and less than 5 ppm by weight (ppmw) molybdenum or tungsten.

88. (previously presented) The ingot of claim 87 comprising tantalum and less than 3 ppmw molybdenum or tungsten.

89. (previously presented) An ingot comprising tantalum, less than about 500 ppm, by weight, total metallic impurities, and less than 5 ppmw each of molybdenum and tungsten.

90. (previously presented) The ingot of claim 89 comprising tantalum and less than 3 ppmw each of molybdenum and tungsten.

91. (previously presented) A powder comprising high purity tantalum comprising tantalum, less than about 500 ppmw total metallic impurities, less than about 50 ppm, by weight, niobium, and less than about 50 ppmw tungsten or molybdenum.

92. (previously presented) The powder of claim 91 comprising less than about 100 ppmw oxygen.

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93. (previously presented) The powder of claim 91 comprising less than 5 ppmw molybdenum or tungsten.

94. (previously presented) The powder of claim 93 comprising less than 3 ppmw molybdenum or tungsten.

95. (previously presented) A powder comprising tantalum, less than about 500 ppmw total metallic impurities, and less than 5 ppmw each of molybdenum and tungsten.

96. (previously presented) The powder of claim 95 comprising less than 3 ppmw each of molybdenum and tungsten.